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ABSTRACT OF THE DISCLOSURE

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Obtained are a semiconductor device which can be implemented with high density of integration while ensuring a constant capacitor capacitance in high reliability and a method of fabricating the same. The semiconductor device, including a memory cell region and a peripheral circuit region, comprises an insulating film, having an upper surface, formed on a major surface of a semiconductor substrate to extend from the memory cell region to the peripheral circuit region. A capacitor lower electrode is formed in the memory cell region to upwardly extend beyond the upper surface of the insulating film on the major surface of the semiconductor substrate. A capacitor upper electrode is formed on the capacitor lower electrode through a dielectric film, to extend onto the upper surface of the insulating film. The capacitor lower electrode includes a capacitor lower electrode part having a top surface and a bottom surface. The upper surface of the insulating film is located between the top surface and the bottom surface of the capacitor lower electrode part.

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